BANKS

with Installation Instructions

Owner's Manual

Banks Split-Dual Monster® Exhaust System

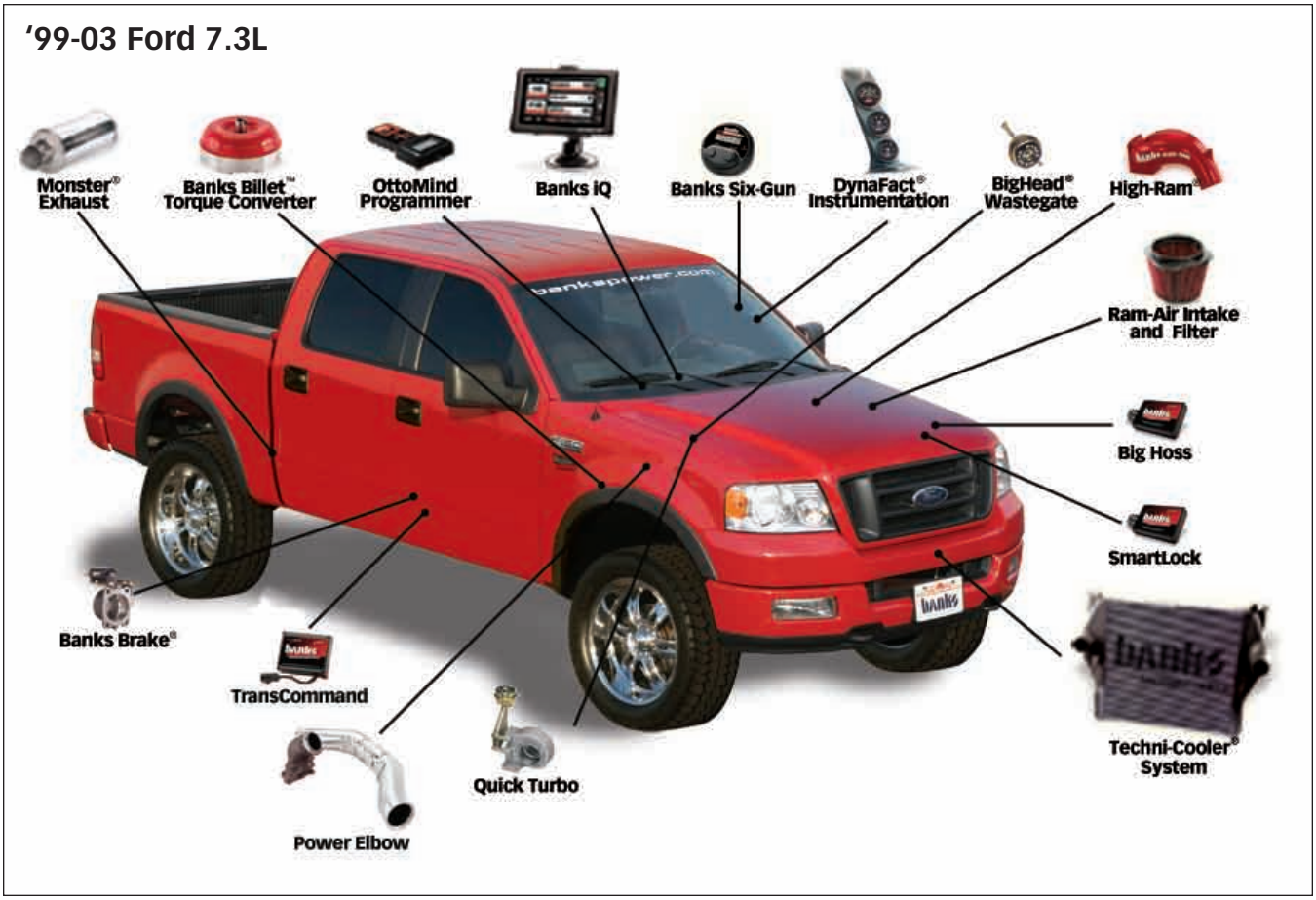
1999-2003 Ford Power Stroke 7.3L Turbo-Diesel F250/F350 Trucks Without Catalytic Converter

THIS MANUAL IS FOR USE WITH

- MONSTER EXHAUST, SYSTEMS 47391-47394
- MONSTER EXHAUST W/ POWER ELBOW, SYSTEMS 47395-47399

BANKS

Also Available from Banks Power for '99-03 Ford 7.3L



Banks Power Elbow
(P/N 48651-48652, 48661-48663)
- Reduces stock outlet and pipe backpressure

Banks Monster® Exhaust System
Sport (P/N 48789)
Single and Dual (P/N 48653-48660, 47391-47399)
- Increases exhaust flow, cuts backpressure, lowers exhaust gas temperatures (EGTs) and increases power.

Banks Ram-Air Intake System
(P/N 96885)
- Increases your airflow over stock.
- Adds power, improves fuel economy, lowers EGTs and reduces smoke.

Banks Techni-Cooler® System
(P/N 25971-25973)
- Provides increased air flow to the engine by increasing air density for more increased power, lower EGTs and improved fuel economy.

Banks Brake
(P/N 55202-55207)
- Increases the stopping power of your truck and extends the service life of your brakes

Banks SmartLock
(P/N 55266)
- Reduces wear on transmission
- Locks Torque Converter and raises trans-line pressure
- Works with Banks Exhaust Brake

Banks TransCommand
(P/N 62570)
- Produces smooth, firm, light-throttle shifts and solid, decisive heavy-load shifts.
- Eliminates excessive clutch slippage

Banks Billet Torque Converter
(P/N 72521)
- Higher torque capacity over stock
- Lockup clutch is slip-resistant so transmission fluids stay cooler and transmission life is prolonged.

Banks Diesel Tuner
Six-Gun (P/N 66513-66515)
Big Hoss (P/N 66505)
- Adds power safely to your vehicle
- Engine and transmission safeguards
- Change power levels on-the-fly

Thermocouple
- Add a temperature limiting function to your Diesel Tuner

Banks QuickTurbo
(P/N 24456-24457)
- More boost through the powerband
- Does not over-boost
- Turbo-diesel efficiency

OttoMind Programmer
(P/N 66064)
- Contains Banks tunes that boost your vehicles HP, Torque and MPG.
- Displays a host of critical engine functions
- Provides "service technician" diagnostic capabilities
- Has upgradeable functionality, so it will never be out of date

Banks Git-Kit Systems
(P/N 47401, 47511-47514)
Contains:
- Monster Exhaust
- Big Hoss Module

Banks Stinger Systems
Contains:
- Ram-Air IntakeFilter
- Monster Exhaust
- Big Hoss Module
- Big Head Wastegate Actuator

Banks PowerPack Systems
Contains:
- Ram-Air Intake Filter
- Monster Exhaust
- Quick-Turbo
- TransCommand
- Techni-Cooler System
- Big Head Wastegate Actuator

Banks Six-Gun Bundle
(P/N 46594-46613)
Contains:
- Ram-Air Intake Filter
- Monster Exhaust
- Six-Gun Tuner
- TransCommand
- Big Head Wastegate Actuator

Banks Big Hoss Bundle
(P/N 46623-46643)
Contains:
- Ram-Air Intake Filter
- Monster Exhaust
- Six-Gun Tuner
- TransCommand
- Big Head Wastegate Actuator
- Techni-Cooler System
- Big Hoss Module
- Power Elbow

Banks Power Combo 1
Contains:
- Big Hoss Module
- TransCommand
- Big Head Wastegate Actuator

Banks Power Combo 2
Contains:
- Six-Gun Tuner
- TransCommand
- Big Head Wastegate Actuator

Banks Power Combo 3
Contains:
- Big Hoss Module
- Monster Exhaust

Banks Power Combo 4
Contains:
- Big Hoss Module
- TransCommand
- Big Head Wastegate Actuator
- Six-Gun Tuner

1. Before starting work, familiarize yourself with the installation procedure by reading all of the instructions.

2. The exploded view (**Figure 1**, pages 6-7) provides only general guidance. Refer to each step and section diagram in this manual for proper instruction.

3. Throughout this manual, the left side of the vehicle refers to the driver's side, and the right side to the passenger's side.

4. Disconnect the negative (ground) cable from the battery (or batteries, if there are two) before beginning work.

5. Route and tie wires and hoses a minimum of 6" away from exhaust heat, moving parts and sharp edges. Clearance of 8" or more is recommended where possible.

6. When raising the vehicle, support it on properly weight-rated safety stands, ramps or a commercial hoist. Follow the manufacturer's safety precautions. Take care to balance the vehicle to prevent it from slipping or falling. When using ramps, be sure the front wheels are centered squarely on the topsides. When raising the front of the vehicle, put the transmission in park (automatic) or reverse (manual), set the parking brake, and block the rear wheels. When raising the back of the vehicle, be sure the vehicle is on level ground and the front wheels are blocked securely. **Caution! Do not use floor jacks to support the vehicle while working under it. Do not raise the vehicle onto concrete blocks, masonry or any other item not intended specifically for this use.**

7. During installation, keep the work area clean. Do not allow anything to be dropped into intake, exhaust, or lubrication system components while performing the installation, as foreign objects will cause immediate engine damage upon start-up.

8. The Dual Exhaust System is designed to accommodate the factory-sized spare tire. If the spare tire is oversized, it may need to be removed.

9. The tip is located for single rear-wheel applications. Installation on dually systems is not recommended.

Tools Required:

- 1/2" and 3/8" drive ratchets with standard and metric sockets and 1/2" and 3/8" drive extension
- Standard and metric combination or open-end wrenches
- Standard screwdriver
- Clean shop towels or rags
- Pry-bar
- Reciprocating saw

Highly recommended tools and supplies:

- Inch-pound and foot-pound torque wrenches
- Penetrating oil or light lubricant spray
- Transmission jack (manual transmission)

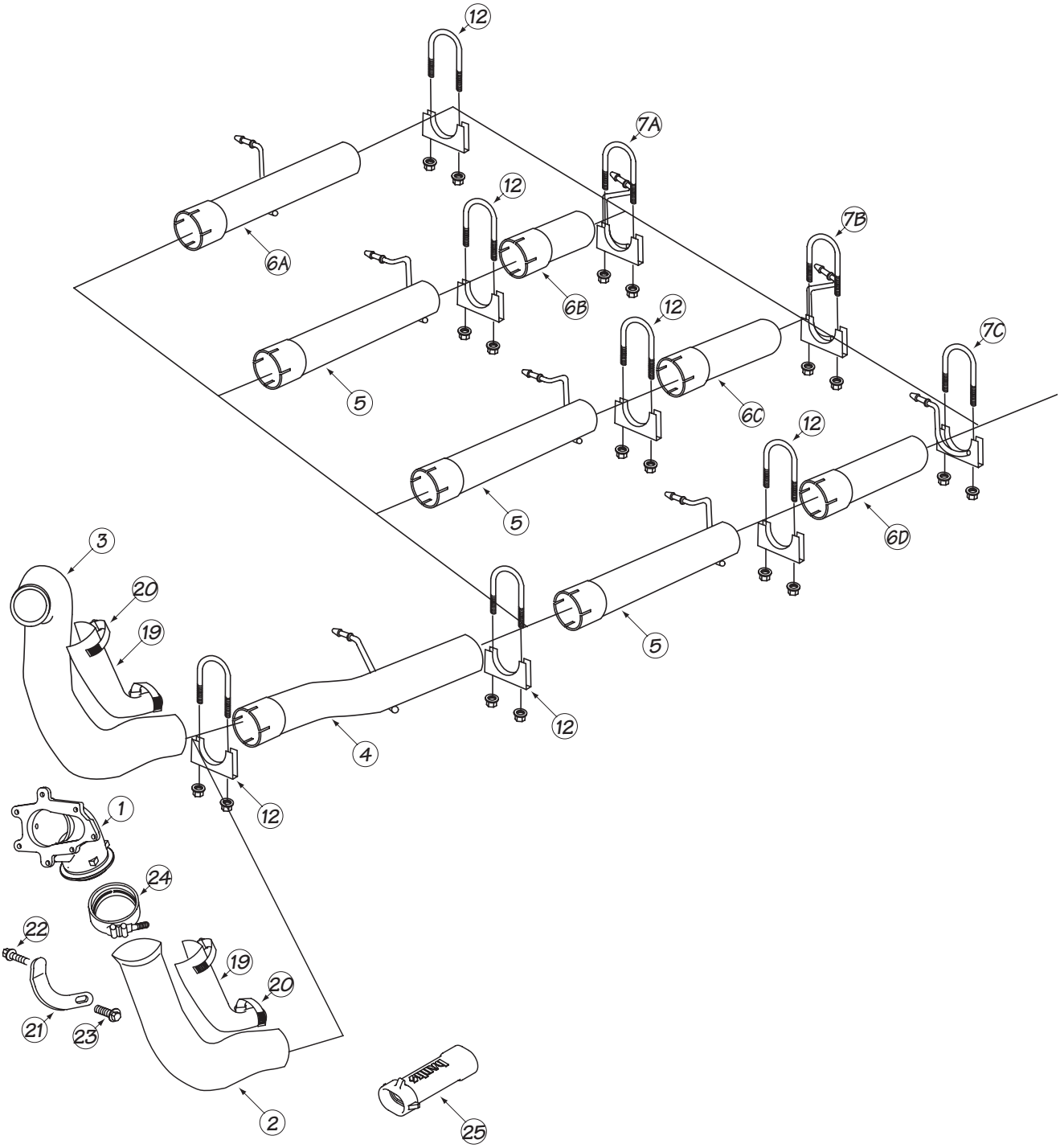
Bill of Materials

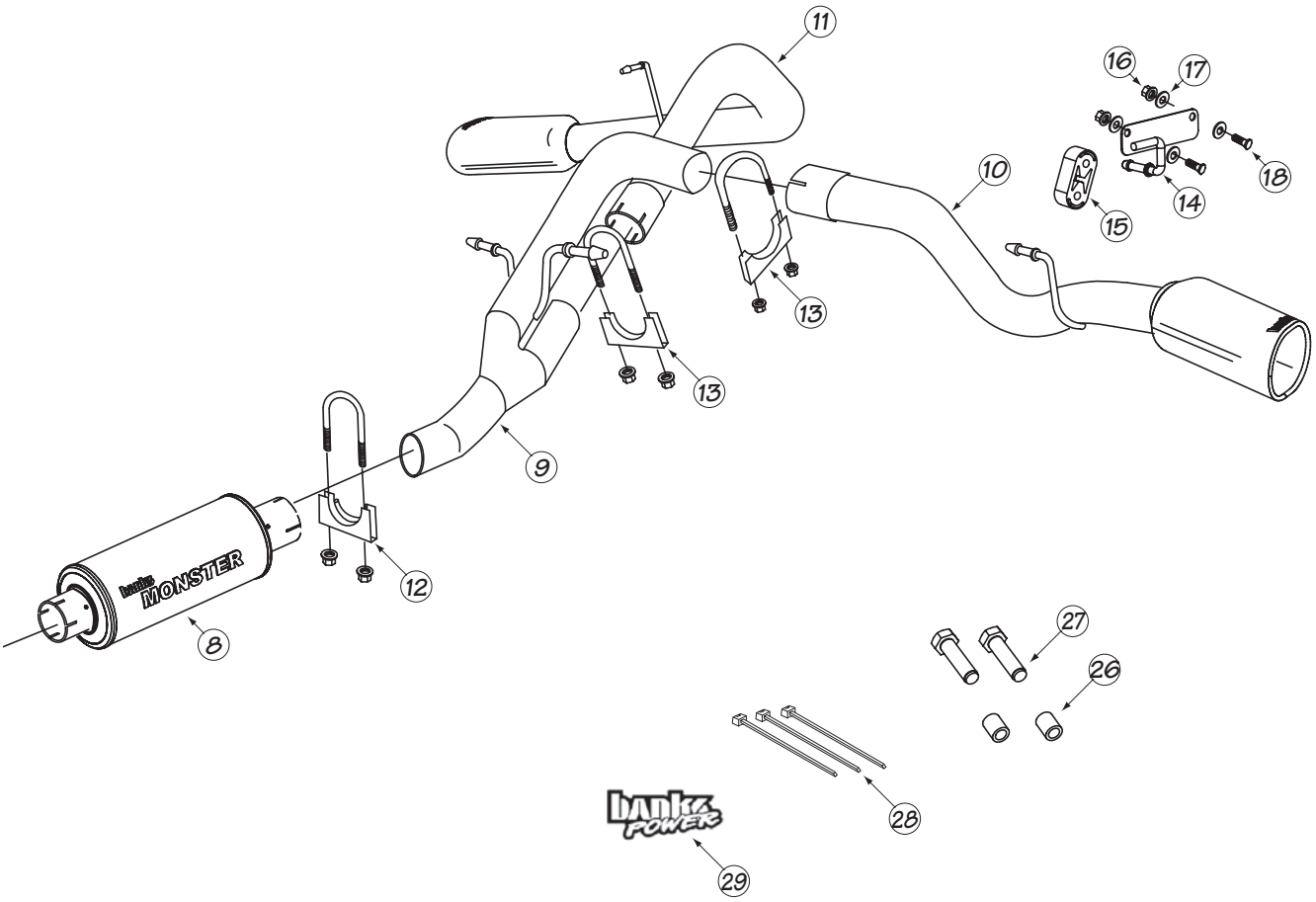
THIS LISTING REFERENCES FIGURE 1, PAGES 6-7

99-03 Ford 7.3L Split Dual Monster Exhaust

Figure 1 Item #	P/N	Description	Kit # 47391 / Power Elbow Kit # 47395 Ext. Cab SB 141" WB	47392 / 47396 Crew Cab SB 156" WB	47393 / 47397 Ext. Cab LB 158" WB	47394 / 47399 Crew Cab LB 172" WB
1	53495	Power Elbow (Optional)	(1)	(1)	(1)	(1)
2	55211	TOP, Power Elbow (Optional)	(1)	(1)	(1)	(1)
3	53587	Monster T.O.P	1	1	1	1
4	53588	Front Intermediate Pipe	1	1	1	1
5	53508	Rear Interm Pipe	—	1	1	1
6a	53569	Extension Pipe, ECSB	1	—	—	—
6b	53570	Extension Pipe, CCSB	—	1	—	—
6c	53571	Extension Pipe, ECLB	—	—	1	—
6d	53572	Extension Pipe, CCLB	—	—	—	1
7a	53577	Hanger Clamp, CCSB	—	1	—	—
7b	53578	Hanger Clamp, ECLB	—	—	1	—
7c	53573	Hanger Clamp, CCLB	—	—	—	1
8	53800	Monster Muffler	1	1	1	1
9	53574	Y-pipe, Dual exhaust	1	1	1	1
10	53575	Tailpipe Drvr Side (Left)	1	1	1	1
11	53576	Tailpipe Pass. Side (Right)	1	1	1	1
12	52470	Exhaust Clamp, 4"	4	4	4	4
13	52468	Exhaust Clamp, 3.5"	2	2	2	2
14	53572	Frame Hanger Bracket	1	1	1	1
15	53732	Rubber Insulator	1	1	1	1
16	91415	Nut, Nylock 3/8-16	2	2	2	2
17	91402	Washer, SAE 3/8	4	4	4	4
18	91427	Bolt 3/8-16x 1"	2	2	2	2
19	26002	Heatshield Blanket, 7x24"	1	1	1	1
20	92864	Hose Clamp, # 64	3 (2 shown)	3	3	3
21	55036	Power Elbow Support Bracket (Opt)	(1)	(1)	(1)	(1)
22	91455	Washer Head Bolt 3/8-16x .75" (Opt)	(1)	(1)	(1)	(1)
23	91922	Washer Head Bolt 10-1.50x20mm (Opt)	(1)	(1)	(1)	(1)
24	92884	V-Band Clamp (Opt)	(1)	(1)	(1)	(1)
25	62545	Warm Up Valve Module (Opt)	(1)	(1)	(1)	(1)
26	26096	Hanger Pin Spacer, 3/8"	2	2	2	2
27	91792	Bolt, M8-1.25 x 45mm	2	2	2	2
28	62001	Cable Tie, Black 5"	3	3	3	3
29	96009	Banks Power Decal	1	1	1	1
	96503	Warranty Card	1	1	1	1
	96484	Owners Manual, Dual Exhaust	1	1	1	1

Figure 1 *99-03 Ford 7.3L Split Dual Monster Exhaust (See page 5 for parts listing)*

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1. Disconnect the negative (ground) cable from the battery (if there is more than one battery, disconnect both negative cables). Secure the cable so it cannot accidentally come in contact with the post.

2. Raise the vehicle and support it securely with properly weight-rated safety stands, ramps or a commercial hoist. Take care to balance the vehicle to prevent it from slipping or falling. When using ramps, be sure the wheels are centered squarely on the topsides. Place the transmission in park (automatic) or reverse (manual), set the parking brake and securely block the wheels that are on the ground. **CAUTION: DO NOT WORK UNDER ANY VEHICLE SUPPORTED ONLY BY A JACK. SEVERE INJURY MAY RESULT.**

WARNING! The following step may require the use of a torch and/ or saw. Proper safety equipment should be used. Failure to use proper safety equipment may result in severe injury.

Note: This exhaust is designed for non catalytic converter vehicles.

3. Begin removing your factory exhaust starting at the muffler. Remove the muffler and tailpipe assembly by removing the clamps or cutting the through the pipe near the joints. The rear driver-side bottom shock bolt may need to be removed to allow for removal. Remove the factory hanger pins from the rubber hangers and remove the tailpipe and muffler. In the same manner, continue removing the intermediate pipes until all that is remaining is the factory turbine outlet pipe (T.O.P.).

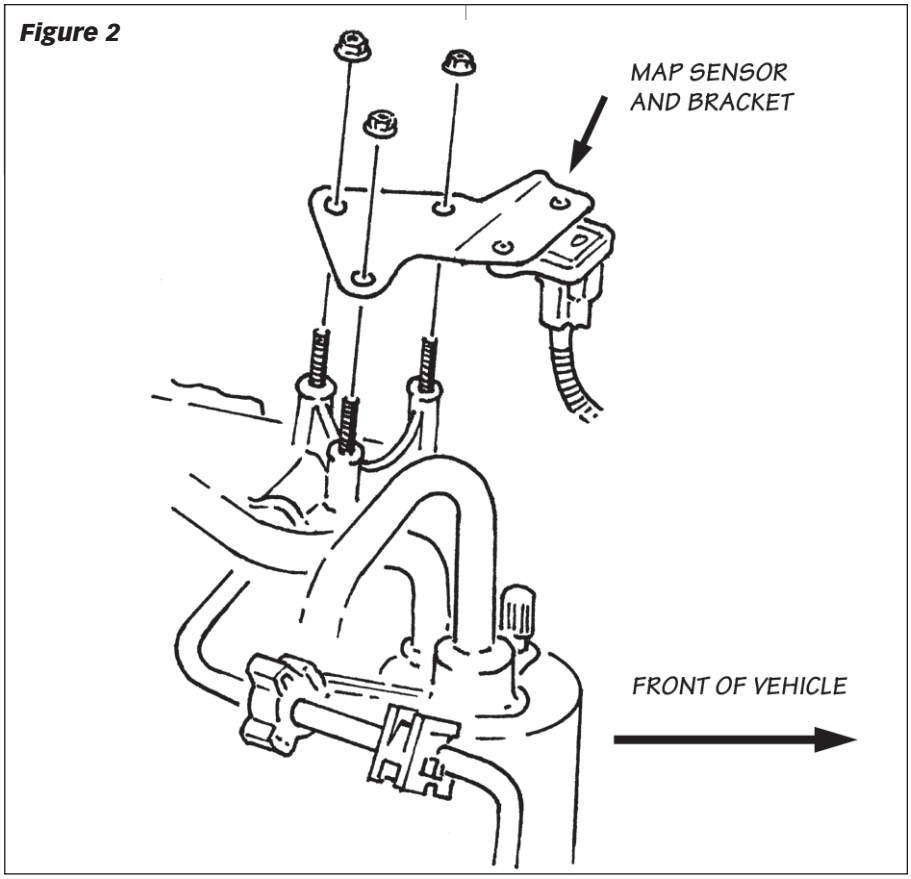
Note, to remove the factory exhaust, an oxy-acetylene torch can be used to heat the factory joints to allow the crimped pipes to separate.

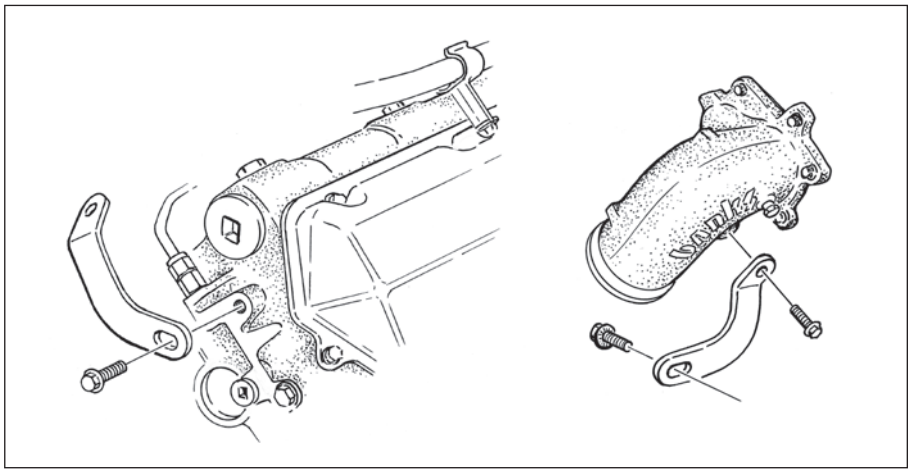
4. Remove and retain the factory V-band clamp on the Turbo outlet. Remove the factory T.O.P.

If a Banks Power Elbow is being installed, follow **Steps 5 thru 11** *below. Otherwise, skip to* **Step 12**.

5. On the passenger side of the vehicle, temporarily remove the manifold absolute pressure (MAP) sensor (**Figure 2**) from its mounting location by removing the three nuts from the mounting studs. Save the nuts for reinstallation later. Set the MAP sensor out of the way by resting it in the intake valley of the engine.

Figure 2





6. Remove both driver- and passenger-side boost tubes and the intake plenum from the vehicle to allow access to the rear of the turbocharger.

7. Disengage the exhaust backpressure control rod by sliding the cover on the end of the rod back toward the turbocharger and pulling the rod downward. This rod is below the turbine housing; it is not the wastegate actuator rod that runs across the top of the turbocharger.

8. Locate the engine lifting hook at the rear of the engine on the passenger side, bolted to the cylinder head. Remove the lifting hook. This will allow clearance for the installation of the Power Elbow. It is not necessary to re-install the hook.

Figure 4

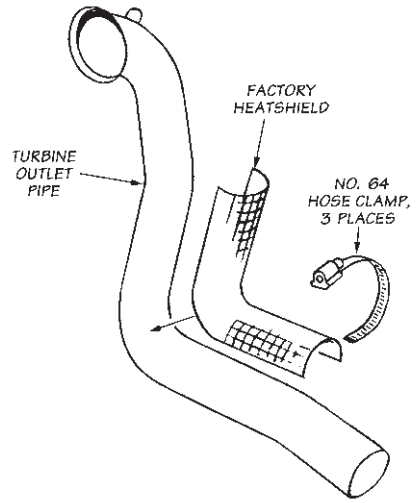
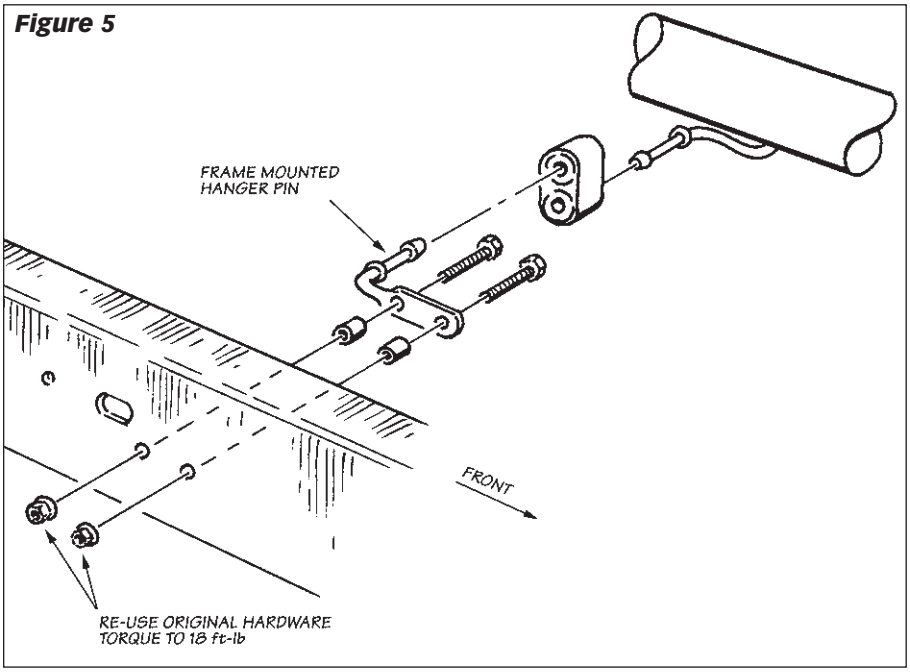


Figure 5



9. Remove the exhaust backpressure control valve assembly from the factory turbine housing by removing the seven (12-point, 8mm head) bolts. Retain these bolts for reuse.

10. Install the Banks Power Elbow casting onto the outlet of the turbocharger using the original bolts. Use the supplied anti-seize compound on the bolts and tighten them evenly. The torque specification for these bolts is 62 in-lb (not ft-lb!)

Note: It may be necessary to re-locate the transmission dipstick tube to allow clearance for the V-band clamp at outlet of Power Elbow. The tube can be re-located with a prybar or similar tool. There should be 3/4"-1" clearance between the tube and the Power Elbow casting.

11. *On 1999 1/2 and later vehicles,* install support bracket between Power Elbow casting and passenger-side cylinder head using supplied 3/8-16 x 3/4" bolt, M10 x 1.5 x 20mm long bolt. See **Figure 3**. The M10x1.5x20mm bolt is used on the cylinder-head side of the bracket. The 3/8-16x3/4 " bolt is used on the Power Elbow side of the bracket.

Note: If a pyrometer is used, the probe may be installed in the threaded port, located on the side of the Power Elbow casting. Remove the plug and install the probe using the anti-seize provided.

12. Locate the 7" x 24" blanket heat shield provided. Form the heat shield to the shape of the Banks Monster T.O.P. (turbine outlet pipe) in the vertical section of the pipe. Secure the heat shield using the three (3) hose clamps provided. (see **Figure 4**).

13. Reusing the saved V-band clamp previously put aside, loosely clamp the upper portion of the turbine outlet pipe to the factory warm-up valve/Power Elbow outlet. Do not tighten at this time.

NOTE: On some Power Strokes a ground strap is bolted on the back of the cylinder head. This bolt may interfere with the Banks turbine outlet pipe. If so, remove the bolt and relocate it in the cylinder head.

14. *On 2002 & 2003 models only,* it is necessary to relocate the factory-installed frame-mounted hanger pin that is located behind the transmission crossmember.

A. Remove the two (2) nuts that hold the frame-mounted hanger pin to the frame rail, save for reinstallation later. Remove the frame-mounted hanger pin from vehicle.

B. Remove the two (2) 8mm studs from the frame-mount hanger pin. *Note: Studs are pressed into hanger pin and will require the use of a hammer or small press to remove.*

C. Reinstall the frame-mounted hanger pin using the two (2) 5/8" long steel spacers, two (2) 8mm x 1.25 x 45mm bolts and the two (2) 8mm nuts (removed in **Step A** above). See **Figure 5** for proper assembly sequence. Torque fasteners to 18 ft-lb.

15. Place a 4" exhaust clamp on the turbine outlet pipe. Install the front intermediate pipe onto the turbine outlet pipe, aligning the hanger pin in the rubber hanger. Place a 4" clamp on the outlet of the front intermediate pipe.

Note: ECSB model's plastic cab protector may need to be notched for intermediate pipe hanger clearance.

16. Install the rear intermediate pipe as supplied (see **Figure 1**). Install a 4" saddle clamp onto the intermediate

pipe outlet.

17. For ECLB, CCSB and CCLB models, install the supplied extension pipe on the intermediate pipe outlet (see **Figure 1**).

18. For ECLB, CCSB and CCLB, install the hanger clamp on the extension pipe outlet. Insert the hanger pin into the corresponding vehicle rubber hanger.

19. Unbolt and remove the stainless steel sheetmetal attached to the underside of the bed. Leave the heatshield portion that is attached to the cab (see **Figure 6**).

20. Install the Banks Monster Muffler onto the intermediate pipe outlet and lightly tighten the 4" clamp / hanger clamp. *Note inlet labeling stamped on the bottom of the muffler. Orient the Banks Monster emboss such that it is level with the frame.*

21. Install the Y-pipe into the Monster Muffler outlet. Insert the two y-pipe hanger pins into the vehicles rubber hanger (see **Figure 7**).

22. Install the Banks rubber hanger onto the supplied hanger bracket. Locate the two slots on the rear driverside frame and install the hanger bracket assembly using the 7/16" Hardware (see **Figure 8**).

23. Install two 3½" clamps onto the top and bottom of the Y-pipe. Route the Driver side tailpipe over the axle and insert into the upper Y-pipe. Install the tailpipe hanger pin into the rubber hanger.

24. Route the Passenger side tailpipe over the axle and insert into the lower Y-pipe. Install the tailpipe hanger pin into the Banks rubber grommet.

25. Move the spare tire to the rear of the vehicle. Adjust the tailpipe tips to be ½" off the body panel and snug the two 3½" clamps. Move the spare tire such that there is equal distance for each tailpipe (see **Figure 9**). Using the provided zip ties, route the vent hose and brake lines away the dual tailpipes.

26. With everything positioned properly, begin to tighten the clamps starting with the ones closest to the front and working your way back.

Figure 6

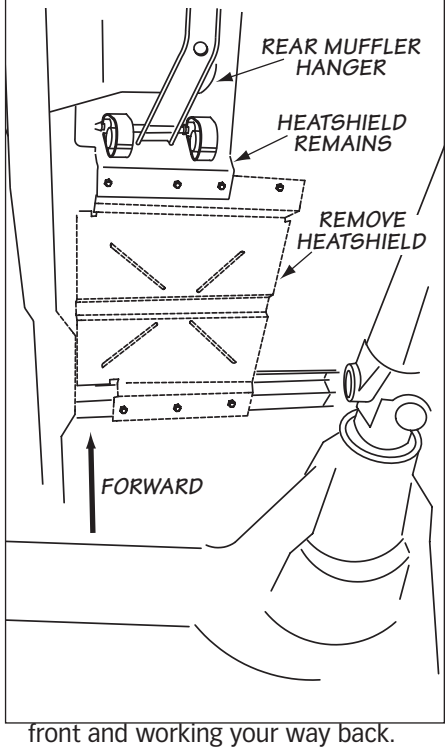


Figure 7

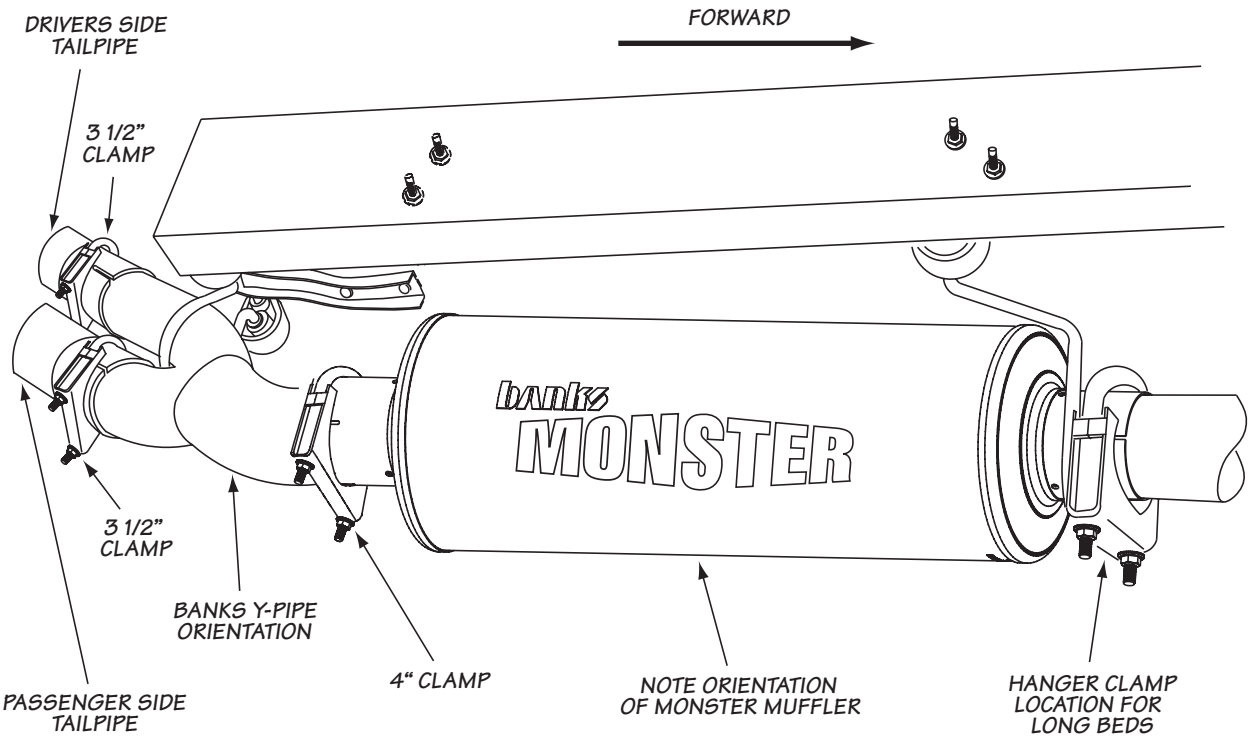


Figure 8

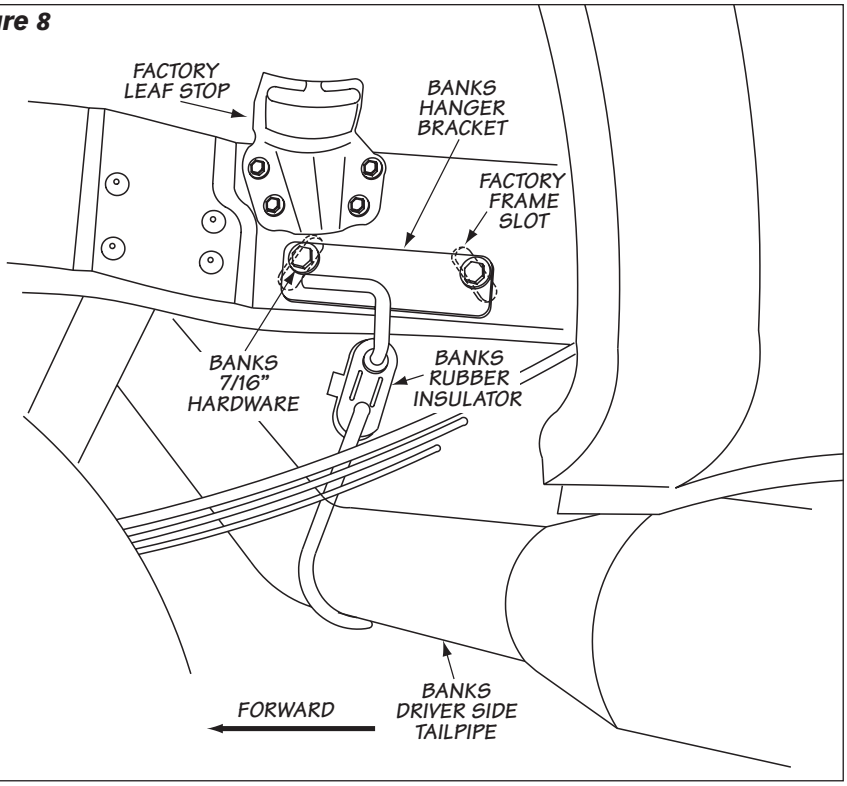
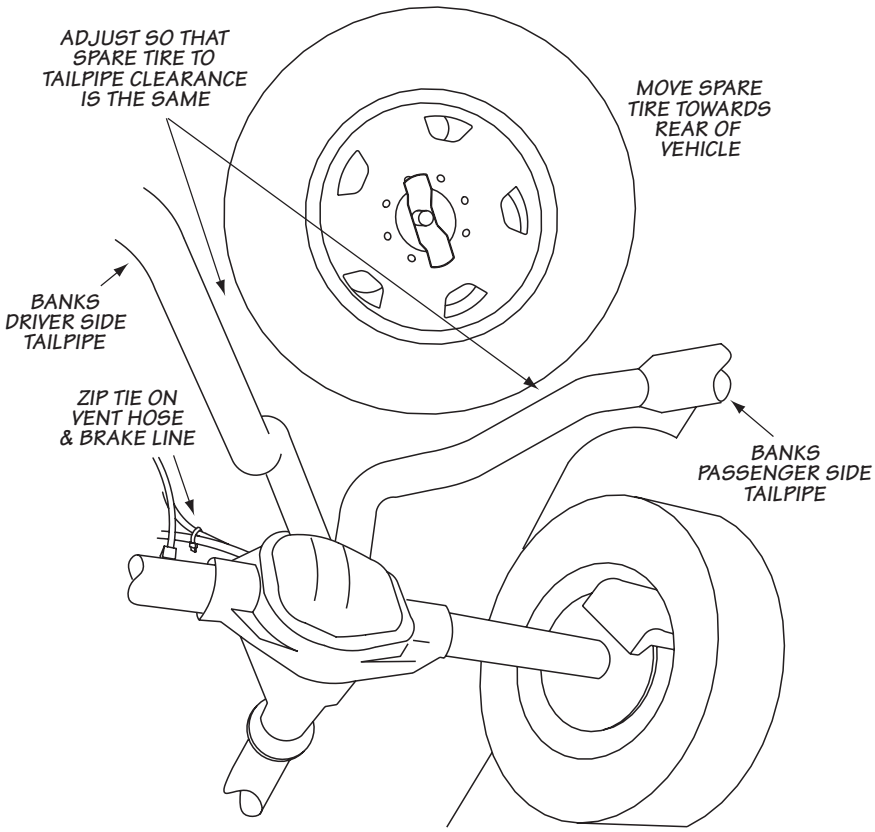


Figure 9


ADJUST SO THAT SPARE TIRE TO TAILPIPE CLEARANCE IS THE SAME
MOVE SPARE TIRE TOWARDS REAR OF VEHICLE
BANKS DRIVER SIDE TAILPIPE
ZIP TIE ON VENT HOSE & BRAKE LINE
BANKS PASSENGER SIDE TAILPIPE

Torque the exhaust clamps evenly to 35 ft-lbs. Make sure that each slip is fully inserted (+/-1/4 inch) and that all mount hangers are in the forward position (see **Figure 10**). Torque 7/16" hanger bracket hardware to 45 ft-lbs. Remove the protective covering from the tailpipe tip. **Caution: The protective covering may ignite and burn if not removed prior to running the engine.**

27. The 2-pin warm-up valve module needs to be installed onto the warm-up valve connector on the vehicle wire harness. On the pedestal under the turbocharger, disconnect the 2-pin connector. Attach the 2-pin connector to the Banks warm-up valve module and zip-tie the module and wire harness away from any moving parts. See **Figure 11**

28. Your system includes two "Banks Power" logos designed to complement the Ford badging on your truck. Use the provided measurements (see **Figure 12**) to position the logos for a clean factory look.

29. Re-connect negative battery cable(s). Start the engine and listen for exhaust leaks. Tighten the exhaust clamps as necessary. Whenever possible, tack-welding slip connections to prevent disengagement is recommended.

The Banks Split-Dual Monster Exhaust installation is now complete.

Figure 10

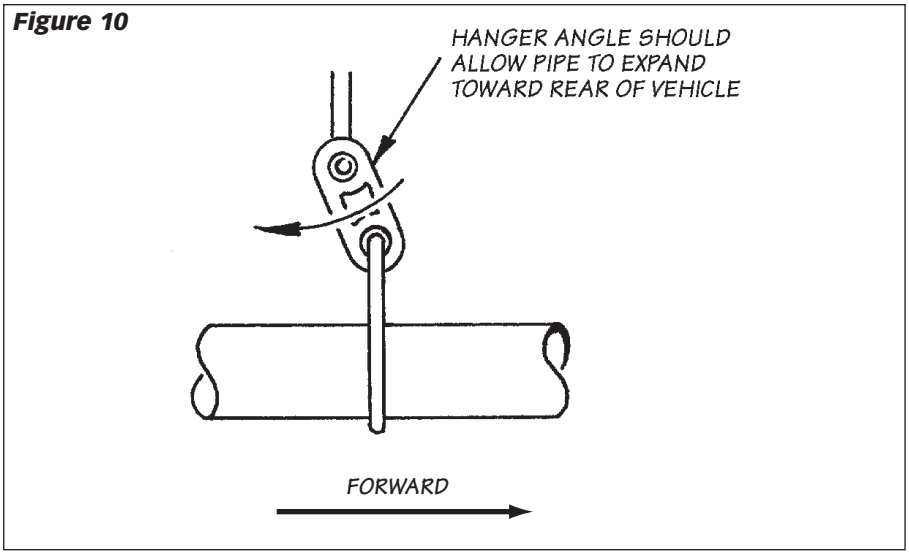


Figure 11

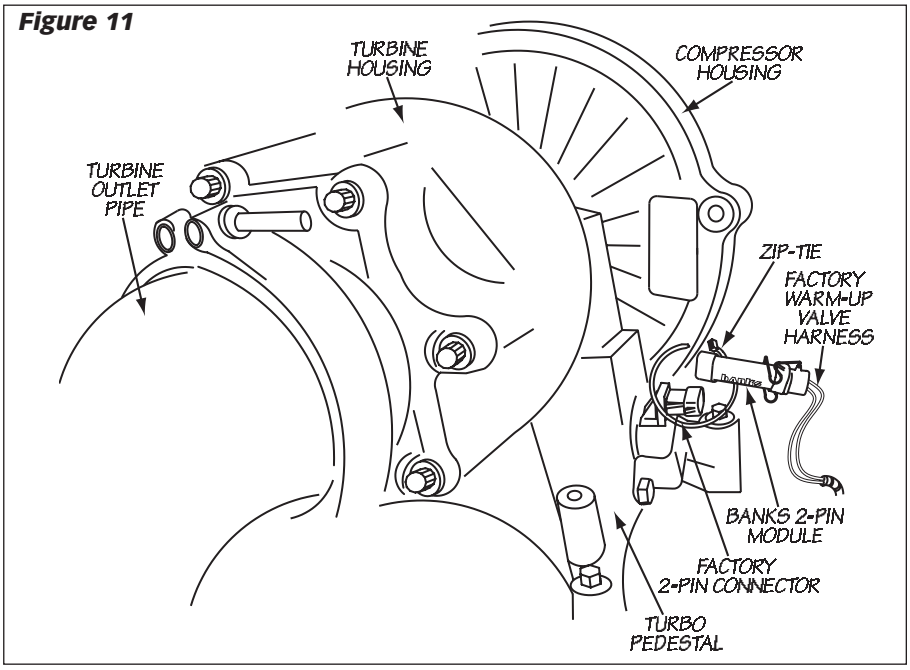
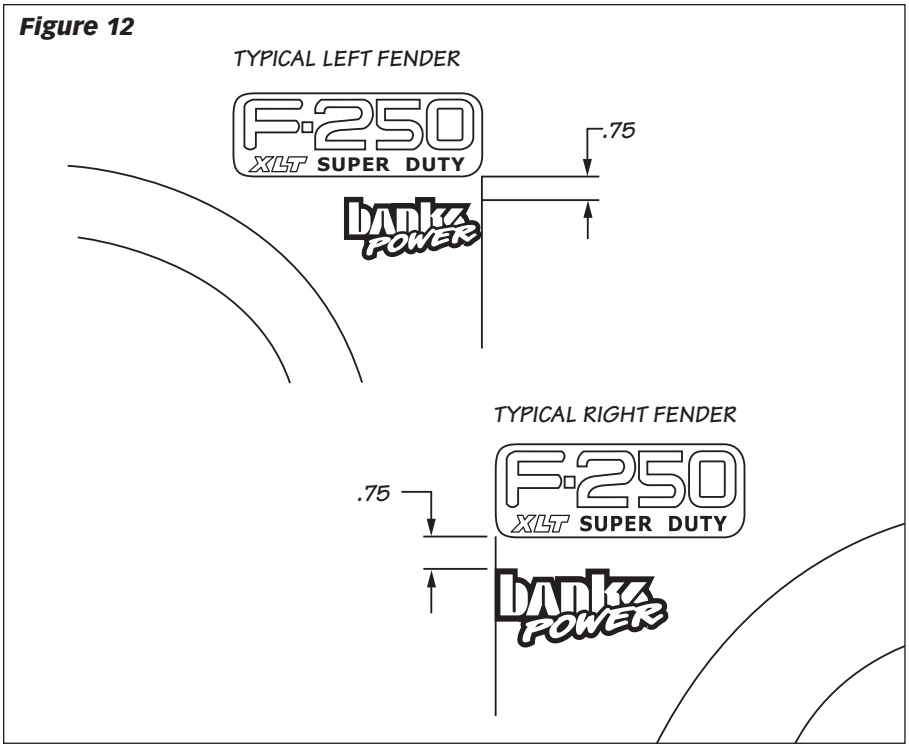


Figure 12


TYPICAL LEFT FENDER
F-250
XLT SUPER DUTY
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BANKS POWER
TYPICAL RIGHT FENDER
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